DOCUMENT RESUME

ED 079 853 EA 005 337

AUTHOR Holdaway, E. A.
TITLE Comparative Analysis of Administrative Structures of Educational Systems in Australia and Canada.
INSTITUTION Alberta Univ., Edmonton. Dept. of Educational Administration.
SPONS AGENCY Alberta Dept. of Education, Edmonton.; Canada Council, Ottawa (Ontario).
PUB DATE Jun 73
NOTE 61p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Administrative Organization; Centralization; *Comparative Analysis; Cost Effectiveness; Decentralization; *Educational Administration; Educational Practice; Educational Research; Educational Strategies; Full State Funding; Organization; Power Structure; *Public School Systems; School Districts; *Staff Utilization; Statistical Data; Tables (Data)
IDENTIFIERS Australia; Canada

ABSTRACT

This document presents comparative data concerning staff utilization under educational systems operated by the State as opposed to those operated by school districts. The study reported here used as its samples the Canadian Provinces of Alberta and British Columbia and the Australian States of Queensland and Victoria. Specifically, the study was designed to compare the Canadian provinces with the Australian States as regards the percentages of numbers and salaries of staff employed in administrative and support functions; and to compare the organizational structures of Australian departments of education with those of large Canadian school districts. The study was guided by the hypothesis that the decentralized Canadian provincial systems of education would have higher percentages of both administrative and support staff at the out-of-school operational level. The results clearly show that the school district type of operation, as currently in vogue in Alberta and British Columbia, employs higher proportions of out-of-school administrative and support staffs than does the centralized operation as typified by Queensland and Victoria. The document includes information on the research methodology employed; the numbers and salaries of staff in the sample; and the staffing and salary ratios for the administrative, support, noninstructional, and instructional school staffs. Numerous charts and tables are included throughout the document. (Author/DN)

FILMED FROM BEST AVAILABLE COPY

ED 079853

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

COMPARATIVE ANALYSIS OF ADMINISTRATIVE STRUCTURES OF EDUCATIONAL SYSTEMS IN AUSTRALIA AND CANADA

E. A. Holdaway, Ph.D.

Department of Educational Administration
The University of Alberta
Edmonton, Canada

July, 1973

EA 005 337

ACKNOWLEDGEMENTS

So many people contributed to the collection and analysis of data in this study that they cannot all be named. Data were provided in Alberta, British Columbia, Queensland, and Victoria by personnel employed in the main and regional offices of Departments of Education, by superintendents and others in central offices of Canadian local school systems, by principals in schools, and by Statistics Canada. In some cases this required considerable time, and the cooperation extended to me is gratefully appreciated. In particular, I am indebted to the following senior officials for permission to conduct this study in their jurisdictions:

Dr. T. C. Byrne, former Deputy Minister of Education, Alberta;
Dr. E. K. Hawkesworth, Deputy Minister of Education, Alberta;
Mr. J. Phillipson, Deputy Minister of Education, British Columbia;
Mr. A. E. Guymer, Director General of Education, Queensland;
Mr. F. H. Brooks, Director General of Education, Victoria.

Dr. T. A. Blowers, Dr. C. C. Uhlman, and Mrs. M. L. Haughey provided major assistance in data collection and analysis for Alberta and British Columbia. Mrs. C. Prokop wrote the computer programs. Dr. G. R. Maddocks, Mr. R. J. Chapman, Mr. M. Neuwelt, Mr. J. E. Pearson, and Mr. E. Pinno helped with various aspects of the project.

Dr. J. E. Reid, Director of Research, Alberta Department of Education, and Dr. C. B. Conway, Director of Research and Standards, British Columbia Department of Education, provided useful insights and information. In Victoria, data collection was facilitated by Mr. T. J. Moore, Assistant Director General, and Mr. A. Osmond, Statistics Officer, Education Department. Mr. W. L. Hamilton, Director of Primary Education, and Mr. N. Alford, Staff Inspector, Research and Curriculum, Department of Education, organized data collection in Queensland.

Financial support was kindly made available by The Canada Council and the Province of Alberta--this is gratefully acknowledged. Without this support, the study could not have been conducted.

ABSTRACT

A considerable amount of attention has been paid to the relative merits of centralized and decentralized educational systems. However, little comparative data exists concerning staff utilization under systems operated by the state as opposed to those operated by school districts.

This study provided such data, using as samples the two Canadian Provinces of Alberta and British Columbia and the two Australian States of Queensland and Victoria. While these four political units were not exactly matched, and although defensible national generalizations could not be drawn from the sample data, nevertheless information was obtained concerning substantial differences in staff utilization. Specifically, the purposes were to compare the percentages of numbers and salaries of staff employed in administrative and support functions, and to compare organizational structures of Departments of Education and large Canadian school districts. Staff numbers were calculated on a full-time equivalent basis. The study was guided by the hypothesis that the decentralized Canadian provincial systems of education would have higher percentages of both administrative and support staff at the out-of-school operational level.

Data and opinions were collected by mail and personal interviews from Departments of Education, school districts, schools, official publications, letters and personal communications. Because complete data could not be obtained, projections to the total sample were necessary. The study had other limitations, of which the main ones were (1) that no reasons which may account for differences were investigated, (2) that titles frequently did not correspond to functions, and (3) that staff who provided services which often were contracted out, namely, those directly involved in plant operation, maintenance, transportation, warehouse and school construction services, were excluded.

The results supported the hypothesis. The proportion of administrative staff employed in either the Departments of Education or the central offices of school districts in the two Canadian provinces averaged 3.34 per cent, as compared with an average of 1.41 per cent of total staff employed in the Departments of Education of the two

Australian states. This discrepancy was also noted when comparisons were made between (1) numbers of staff per 1,000 pupils (1.82 compared with 0.71), and (2) percentages of total salaries paid to this out-of-school administrative sector (5.41 per cent compared with 2.13 per cent).

Comparison of the support staff percentages (clerical-secretarial staff) showed the same trend. The out-of-school support staff averaged 3.52 per cent of total staff in Canada and 1.81 per cent in Australia. On a per 1,000 pupil basis, the numbers of staff were 1.93 and 0.90 respectively.

The Australian states averaged 6.93 per cent of total staff classified as in-school administrative, as compared with 4.58 per cent for the Canadian provinces. On the per 1,000 pupil basis, the averages were 3.48 and 2.48. However, the Canadian schools employed a higher proportion of support staff in schools (secretarial-clerical and aides) with 7.65 per cent as compared to 3.32 per cent for the Australian schools. Canadian schools averaged 4.15 support staff per 1,000 pupils, and Australian schools 1.87.

In many respects, the organizational structures of the larger Canadian school districts paralleled those of their Departments of Education, and duplication of some functions was noted, particularly with respect to program development. The Canadian organization typically showed integration of staffing and instruction across all grade levels. Possibly because of the sizes of their operations, the Australian Departments had maintained separate sections to administer primary (elementary) and secondary education.

The results clearly show that the school district type of operation, as currently in vogue in Alberta and British Columbia, employs higher proportions of out-of-school administrative and support staffs than does the centralized operation as typified by Queensland and Victoria. This finding may be complicated by factors such as different demands upon in-school administrators and by variations in the quantity of administrative and support services which are available relative to need.

Other benefits of the study were the development of a comprehensive classification of staffing components, the provision of detailed staffing and salary information for these components in the four political units, and the identification of areas for more detailed research in this topic.

PREFACE

For various reasons, compilation of the data shown in tables in this Report occupied a great deal of time, and some approximations were necessary. The numbers of teachers and pupils were not constant in any school year, adjustments to salaries occurred at different times, and teachers shown on staff lists were not teaching for reasons such as study, illness, and secondment. The data contained in this Report are not guaranteed to be accurate, but they are based upon information believed to be reliable.

Because data were compiled from a wide variety of sources--annual reports, other official publications, letters, questionnaires, and personal communications were all used--these sources have not been identified individually for each piece of information.

A considerable body of literature exists on the advantages and disadvantages of centralized and decentralized systems of education. Although this literature is relevant, the decision was made not to include it in this publication, but rather to focus upon the quantitative data.

CONTENTS

Chapter		Page
1.	PURPOSE AND BACKGROUND OF THE STUDY	1.1
	Introduction	1.1
	Purpose of the Study	1.2
	Organization of Education in Each Province/State	1.2
2.	RESEARCH METHODOLOGY	2.1
	Introduction	2.1
	Samples	2.3
	Analyses	2.5
	Definitions	2.5
	Limitations	2.9
	Assumptions	2.10
3.	NUMBERS AND SALARIES OF STAFF	3.1
	Introduction	3.1
	Central and Regional Offices of Departments of Education	3.1
	Central Offices of School Districts in Canada	3.6
	Schools	3.6
	Total Distributions	3.14
4.	STAFFING AND SALARY RATIOS	4.1
	Introduction	4.1
	Administrative Staff	4.1
	Support Staff	4.7
	Non-Instructional Staff	4.8
	Instructional Staff	4.8
	Comments	4.9

TABLES

		PAGE
1.	Some Selected Characteristics of the Four Provinces/States in 1971.	2.2
2.	Numbers of Pupils in the Twenty-four School Districts in the British Columbia Sample	2.4
3.	Numbers and Salaries of Administrative and Support Staff in the Central and Regional Offices of the Alberta Department of Education.	3.2
4.	Numbers and Salaries of Administrative and Support Staff in the Central Office of the British Columbia Department of Education	3.3
5.	Numbers and Salaries of Administrative and Support Staff in the Central and Regional Offices of the Queensland Department of Education.	3.4
6.	Numbers and Salaries of Administrative and Support Staff in the Central Office of the Victorian Education Department	3.5
7.	Numbers and Salaries of Administrative and Support Staff in Central Offices of local School Districts in Alberta and British Columbia	3.7
8.	Numbers and Salaries of Administrative and Instructional Staff Who Worked in Schools in Alberta	3.8
9.	Numbers and Salaries of Administrative and Instructional Staff Who Worked in Schools in British Columbia.	3.9
10.	Numbers and Salaries of Administrative and Instructional Staff Who Worked in Schools in Queensland.	3.10
11.	Numbers and Salaries of Administrative and Instructional Staff Who Worked in Schools in Victoria.	3.11
12.	Numbers and Salaries of In-School Support Staff in Alberta	3.12
13.	Numbers and Salaries of In-School Support Staff in British Columbia	3.12
14.	Numbers and Salaries of In-School Support Staff in Queensland	3.13
15.	Numbers and Salaries of In-School Support Staff in Victoria	3.13
16.	Total Distributions of Staff in Four Provinces/States. . .	3.15
17.	Total Distributions of Salaries in Four Provinces/States .	3.16
18.	Percentages of Employees in Various Categories in Four Provinces/States	4.2

TABLES (continued)

Page

19. Percentages of Salaries in Various Categories in Four Provinces/States 4.3

20. Numbers of Various Categories of Staff per 1,000 Pupils in Four Provinces/States 4.4

21. Salary Costs per Pupil for Various Categories of Staff in Four Provinces/States 4.5

FIGURES

		Page
1.	Organization of G. 1-12 Education in Alberta in 1971	1.3
2.	Organizational Structure of the Alberta Department of Education in 1971.	1.5
3.	Organizational Structure of a Large Public School District in Alberta.	1.6
4.	Typical Organizational Structure of a School District in Alberta Having about 5,000 Pupils.	1.7
5.	Typical Organizational Structure of a School District in Alberta Having about 2,000 Pupils.	1.8
6.	Organization of K-12 Education in British Columbia in 1971	1.9
7.	Organizational Structure of the British Columbia Department of Education in 1971.	1.10
8.	Organizational Structure of a Large School District British Columbia	1.11
9.	Organizational Structure of the Education Department, Victoria in 1971	1.13
10.	Organizational Structure of the Department of Education, Queensland in 1971	1.14

CHAPTER 1

PURPOSE AND BACKGROUND OF THE STUDY

In both Australia and Canada, public education from kindergarten to matriculation is essentially the responsibility of the states/provinces. In Australia, Departments of Education have retained control over the operation of government schools offering G. 1-12[1] education. The Canadian tradition, however, has been for provincial Departments of Education to allow local school boards to exercise autonomy in a wide range of functions. That is, in Australia, the public educational system of each state consists of a loose conglomerate of schools administered centrally on a two-tier basis, whereas the Canadian educational system of each province is three-tiered with the major constituent parts being individual school districts.[2]

Consequently, public education in Australia has often been described as "centralized," and that in Canada as "decentralized," but these terms must be used with caution. This is particularly important when control of instructional programs and other aspects of the operation of individual schools are discussed in connection with the extent to which the parent system is centralized. Measures have been introduced recently to regionalize some aspects of the administration of education in Australia, whereas in Canada amalgamation of many of the smaller school districts into larger and more viable units has been a prominent recent development.

In a sense, the two structural arrangements, which initially reflected quite different policies, are now tending to become similar in some respects. For example, the Province of New Brunswick has since 1967 operated all schools within its boundaries, with local school boards having little authority.

---

[1] Grade 1-12 is used for purposes of consistency, although the term "Forms" is used in some Australian systems to refer to secondary grades.

[2] Although the terms "school division" and "school county" are also used in Canada, the inclusive term "school district" is used in this Report.

At this time, with these various changes still occurring, comparison of some aspects of staff utilization under the different educational systems appeared to be of interest and benefit. Considerable discussion about the relative merits of state and local systems has occurred in Australia, but little comparative data has been available on details of administrative arrangements and costs.

PURPOSE OF THE STUDY

The major objective was to compare the proportions of professional staff in administrative and supervisory positions in the public educational systems providing G. 1-12 or K.-12 education in (a) Alberta and British Columbia, Canada, (in the 1971-72 school year) and (b) Queensland and Victoria, Australia, (in the 1971 school year).

Associated objectives were as follows:

(a) to compare proportions of professional staff salaries occupied by salaries of administrative and supervisory staff;

(b) to compare proportions of support staff (clerks and aides);

(c) to compare the various administrative structures.

Hypothesis

Because education was administered by two levels of agencies above the school level in Canada, as compared with one level in Australia, the following hypothesis was formulated:

"Higher proportions of staff are involved in central office administrative and support activities in Canadian provinces than in Australian states."

Comparison of proportions, rather than of absolute numbers of staff and actual salaries, allowed for differences in size of the educational operation in each of the four areas, and for differences in salary scales.

ORGANIZATION OF EDUCATION IN EACH PROVINCE/STATE

Province of Alberta

In the 1971-72 school year, G. 1-12 education in Alberta was administered under the framework shown in Figure 1. Figure 2 illustrates the organization of the Department of Education in Edmonton. The six

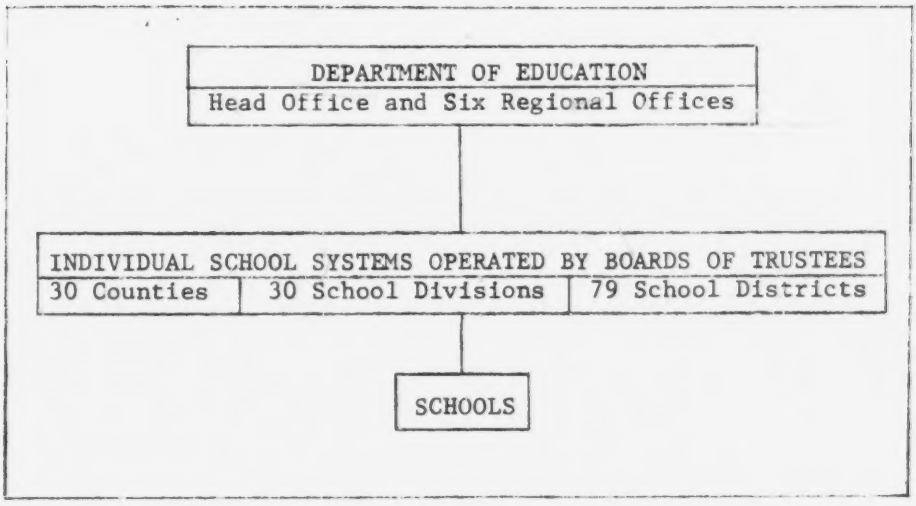

Figure 1.

Organization of G. 1-12 Education in Alberta in 1971

Regional Offices of Education (later reduced to five) operated in the major cities of Edmonton and Calgary, and the smaller centres of Grande Prairie, Red Deer, Lethbridge, and Athabasca, with a staff of 44 consultants and coordinators. Some services of Department of Education offices were shared with the newly created Department of Advanced Education.

School districts operated in cities, towns, villages and rural areas. All school systems, including both "public school districts" (usually for Protestant children) and "separate school districts" (usually for Catholic children), were supported by provincial revenues and local property taxes. School divisions consisted of a consolidation of several school districts in rural areas. Counties were local government units responsible for both school and municipal administration. Figure 3 shows the organizational structure of a large public school district, and Figure 4 that of a typical medium-sized school district. As can be seen from Figures 2 and 3, the functional subdivisions of the Alberta Department of Education and the school district were quite similar.

All superintendents of schools in Alberta were employed by the local school district, county or division. Small school systems did

not have superintendents, and often their only central office staff member was a full-time or part-time secretary-treasurer.

Alberta schools were organized on a 6-3-3 basis, although many schools, particularly those in rural areas, had combinations of these grade levels.

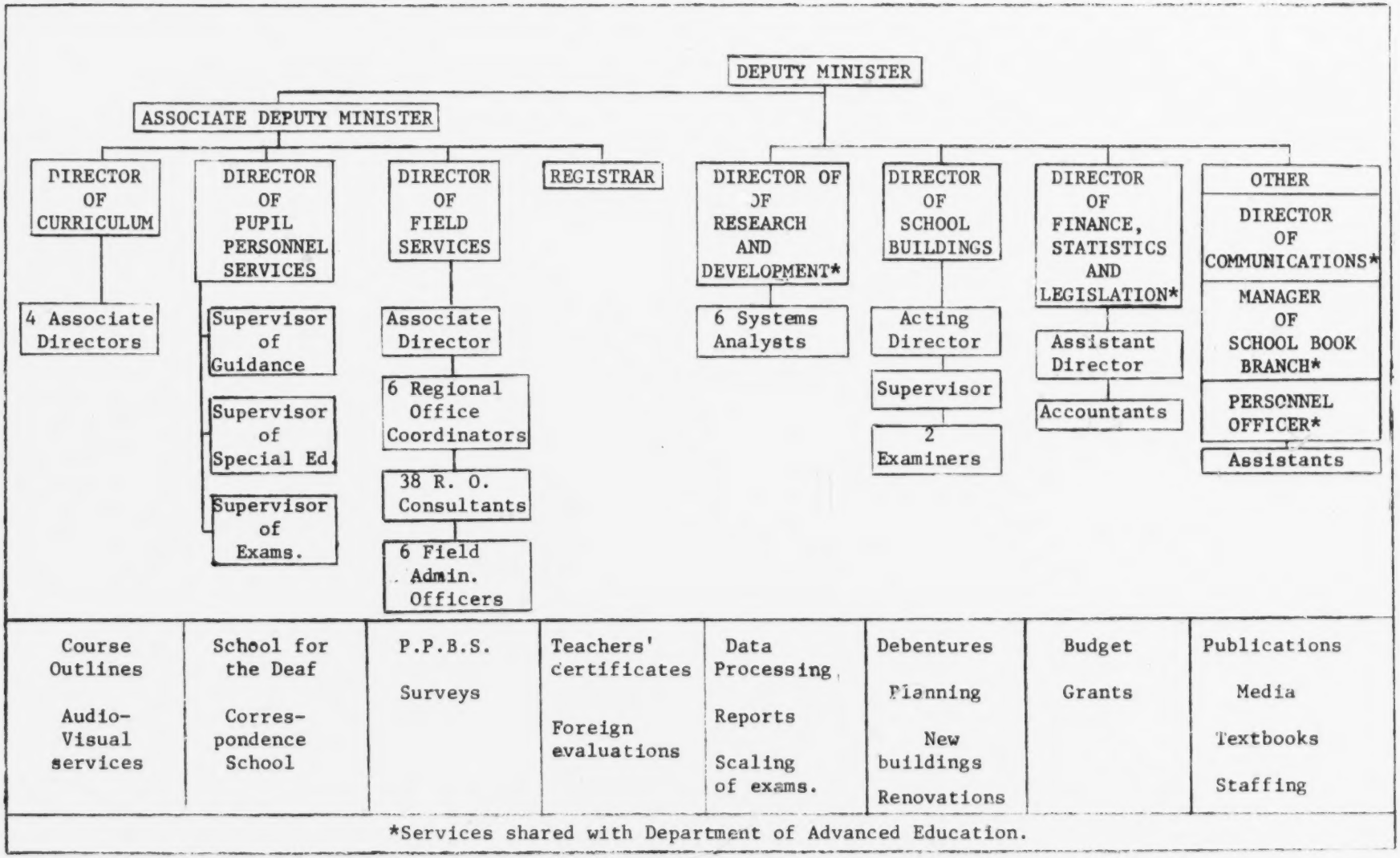

Figure 2.

Organizational Structure of the Alberta Department of Education in 1971

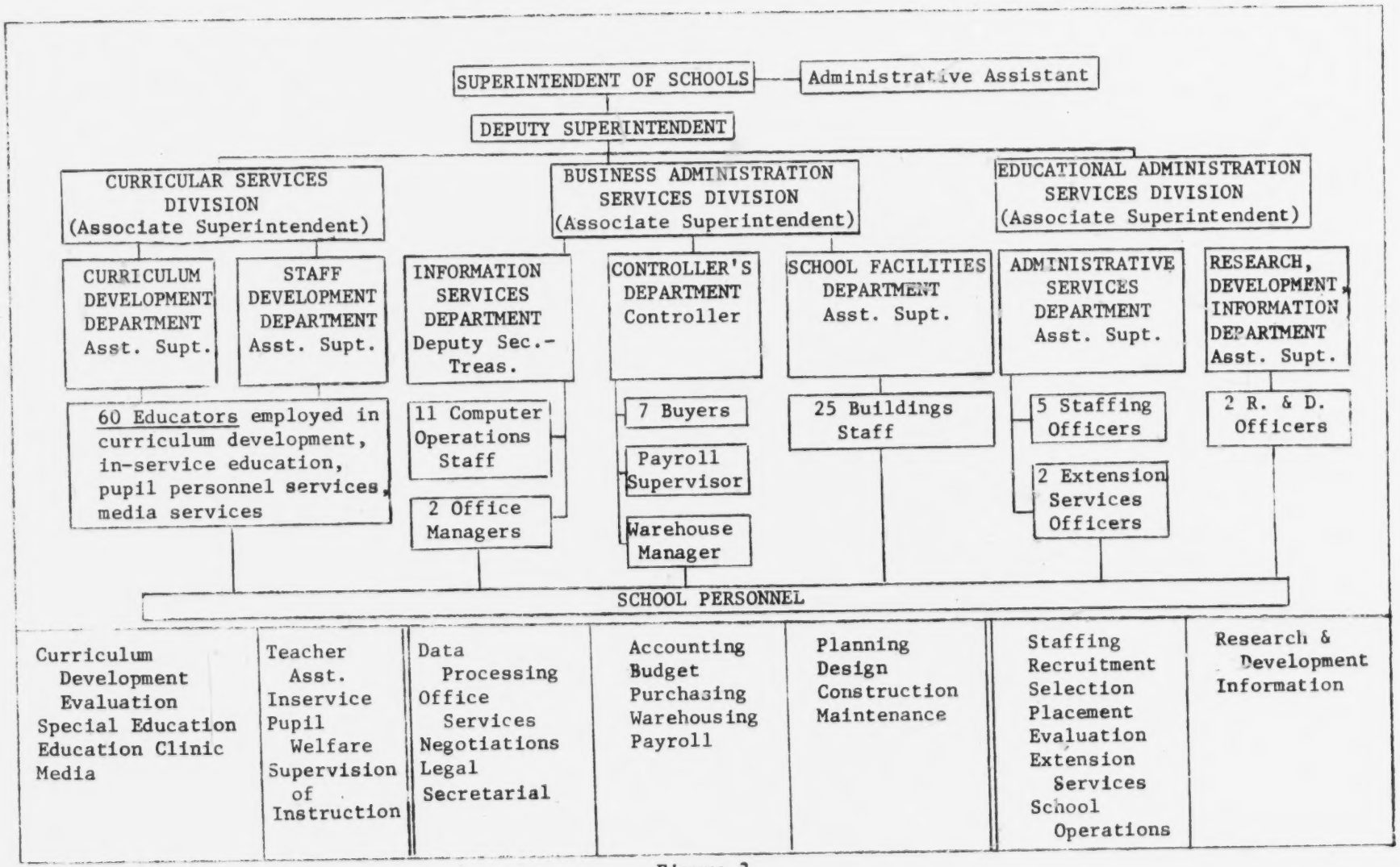
SUPERINTENDENT OF SCHOOLS
Administrative Assistant
DEPUTY SUPERINTENDENT
CURRICULAR SERVICES DIVISION (Associate Superintendent)
BUSINESS ADMINISTRATION SERVICES DIVISION (Associate Superintendent)
EDUCATIONAL ADMINISTRATION SERVICES DIVISION (Associate Superintendent)
CURRICULUM DEVELOPMENT DEPARTMENT Asst. Supt.
STAFF DEVELOPMENT DEPARTMENT Asst. Supt.
INFORMATION SERVICES DEPARTMENT Deputy Sec.-Treas.
CONTROLLER'S DEPARTMENT Controller
SCHOOL FACILITIES DEPARTMENT Asst. Supt.
ADMINISTRATIVE SERVICES DEPARTMENT Asst. Supt.
RESEARCH, DEVELOPMENT, INFORMATION DEPARTMENT Asst. Supt.
60 Educators employed in curriculum development, in-service education, pupil personnel services, media services
11 Computer Operations Staff
2 Office Managers
7 Buyers
Payroll Supervisor
Warehouse Manager
25 Buildings Staff
5 Staffing Officers
2 Extension Services Officers
2 R. & D. Officers
SCHOOL PERSONNEL
Curriculum Development Evaluation Special Education Education Clinic Media
Teacher Asst. Inservice Pupil Welfare Supervision of Instruction
Data Processing Office Services Negotiations Legal Secretarial
Accounting Budget Purchasing Warehousing Payroll
Planning Design Construction Maintenance
Staffing Recruitment Selection Placement Evaluation Extension Services School Operations
Research & Development Information

Figure 3.

Organizational Structure of a Large Public School District in Alberta

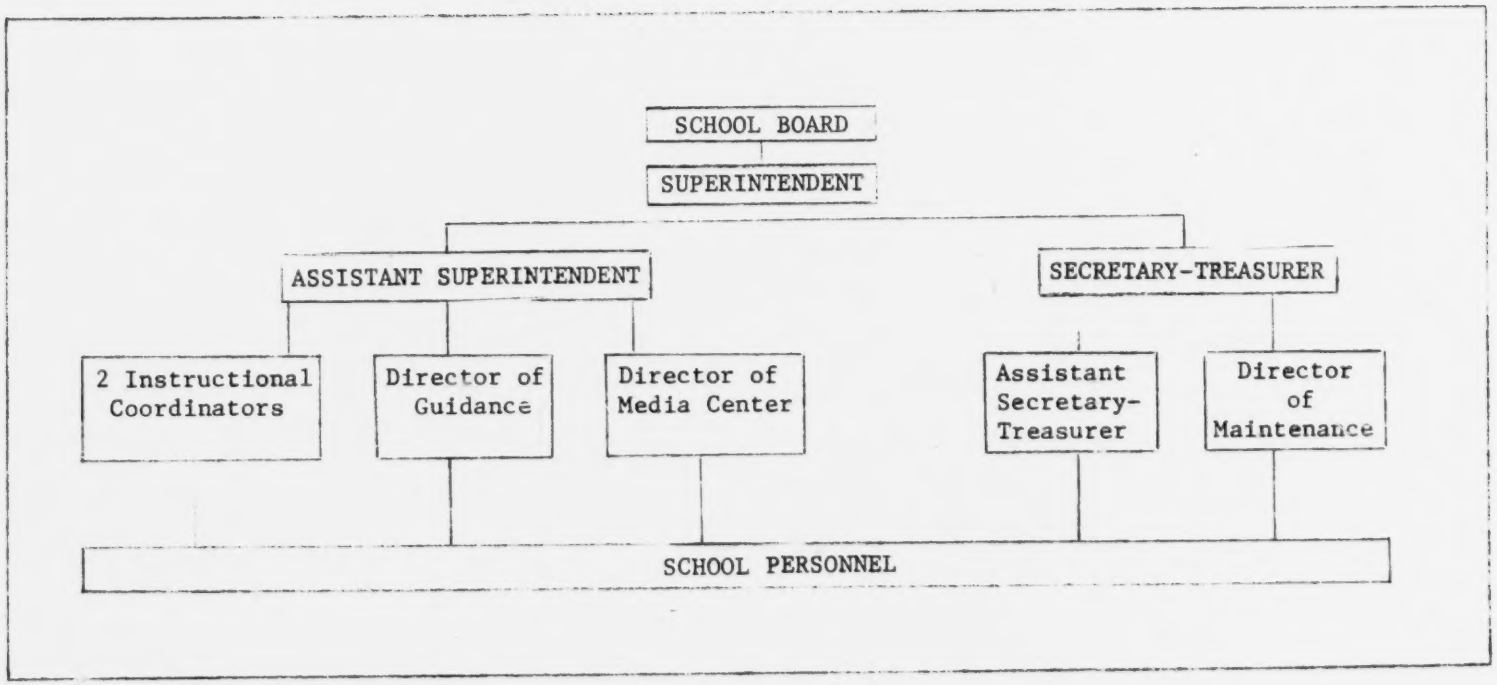

Figure 4.

Typical Organizational Structure of a School District in Alberta Having about 5,000 Pupils

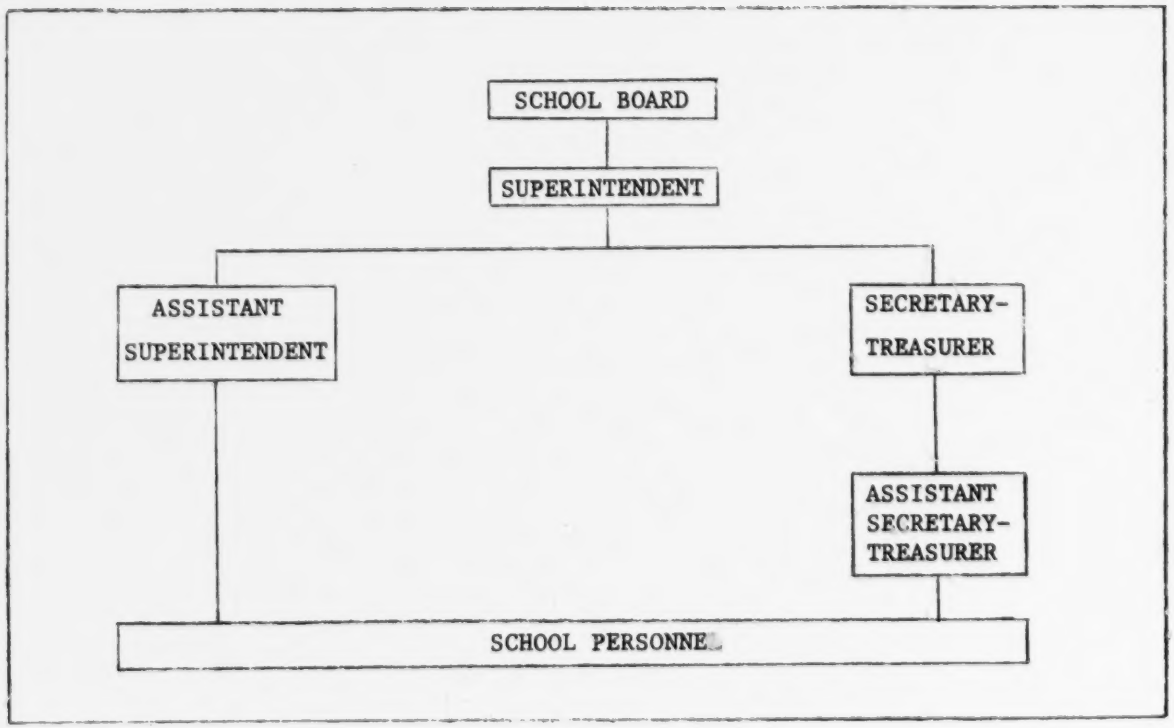

Figure 5.

Typical Organizational Structure of a School District in Alberta Having about 2,000 Pupils

Province of British Columbia

The organization of educational units was less complex in British Columbia (Figure 6) than in Alberta. There were no regional offices, and all superintendents, except in the Vancouver School District, were employees of the provincial government, but they were also chief executive officers of the school district boards for which they worked. They received their salaries from both the Department of Education and the local school district.

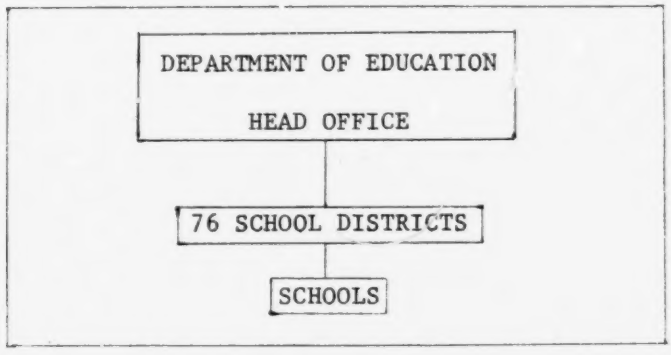

Figure 6.
Organization of K.-12 Education in British Columbia in 1971

Figure 7 represents the organization of the British Columbia Department of Education. It controlled education at the kindergarten, elementary/secondary and post-secondary levels.

Figure 8 portrays the organization of a large public school district in British Columbia. The organizational patterns of smaller school districts in British Columbia were similar to those described above for Alberta.

Schools in British Columbia were organization on a K-7-3-2 basis, although, as in Alberta, a wide variety of grade combinations occurred, particularly in the rural schools, and not all school districts provided kindergartens.

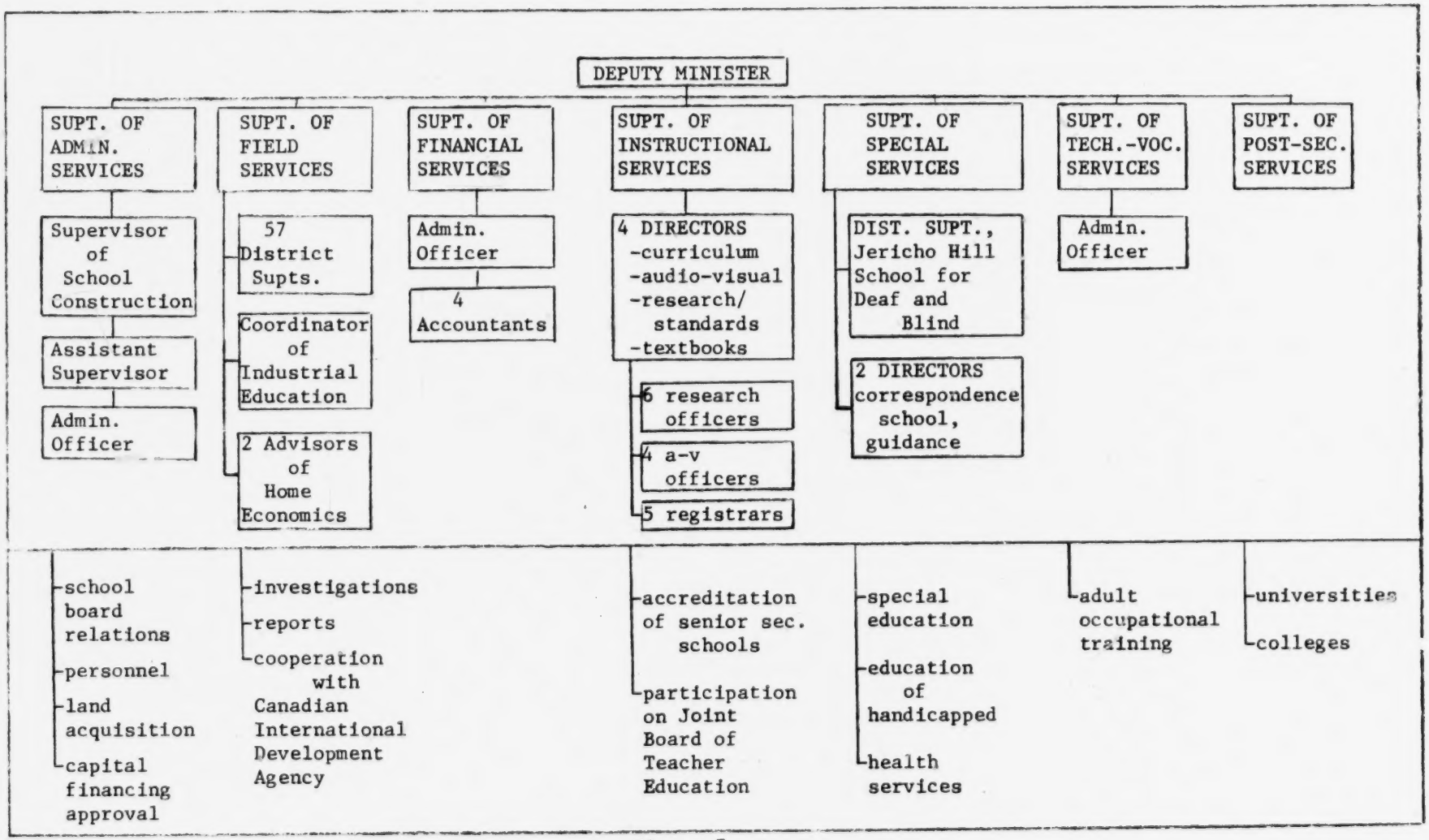

Figure 7.

Organizational Structure of the British Columbia Department of Education in 1971

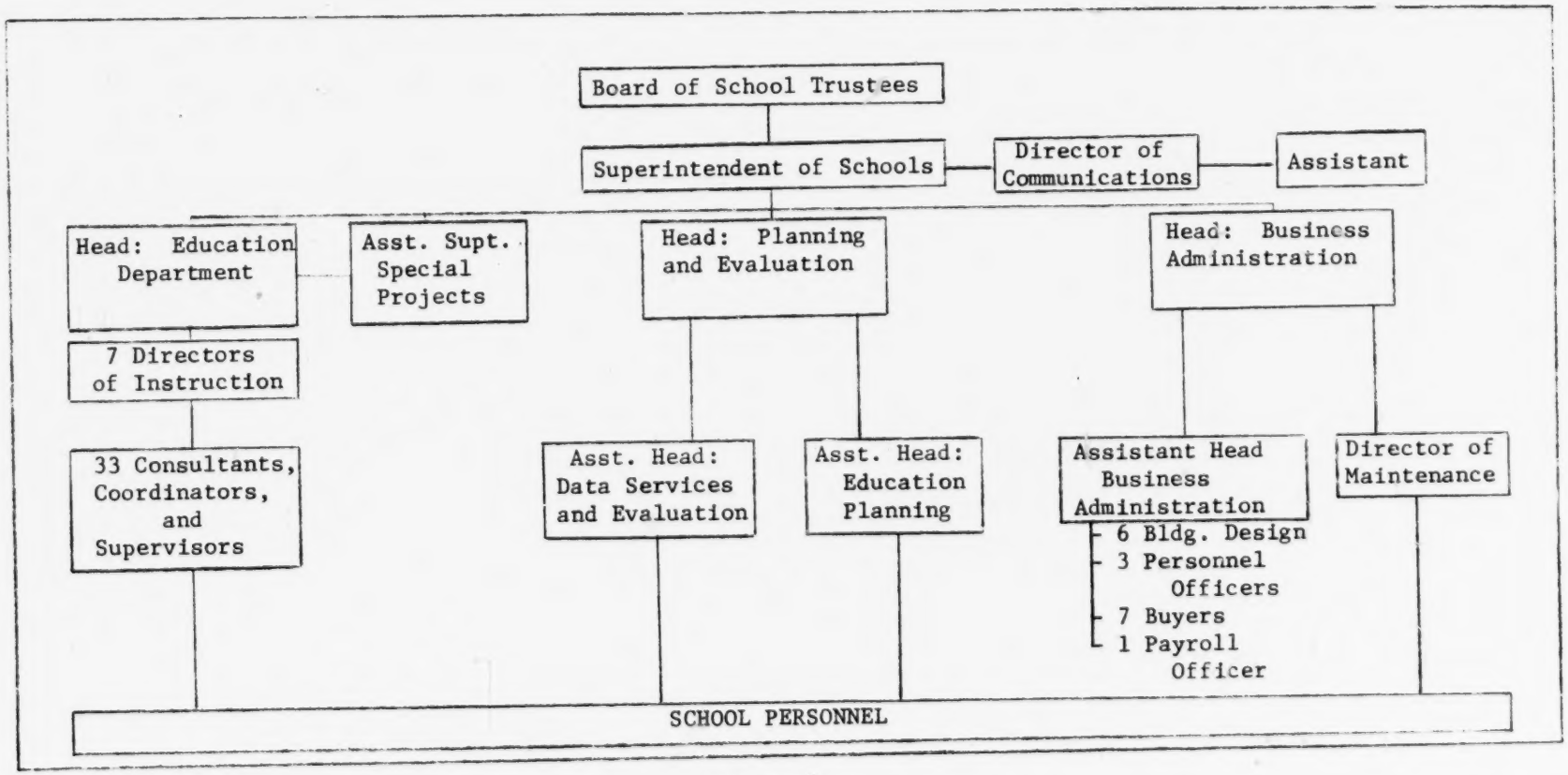

Figure 8.

Organizational Structure of a Large School District in British Columbia

State of Victoria

Figure 9 represents the structure of the Education Department in Victoria. In contrast to the Canadian Departments, the central office structure was separated into components dealing with specific types of schools, namely, primary (G. 1-6), high (secondary), and technical. The three Assistant Directors-General were not in direct line positions with respect to these primary, high, and technical divisions, but they did have authority for specific functions with respect to planning, personnel, and buildings.

Services to the Education Department were provided by two autonomous departments, namely the Department of Public Works and the Public Service. The Public Service staff (clerical-secretarial) were included in the analysis, but Public Works staff were not.

The Teachers Tribunal determined matters such as salaries, conditions of employment, and the size of the teaching force. The Committee of Classifiers prepared lists of teachers classified by seniority.

Schools communicated with the Education Department either directly, or through the primary District Inspectors.

The Teacher Education division was omitted from the analysis, as it was not involved with G. 1-12 students.

State of Queensland

The structure of the Queensland Department of Education (Figure 10) in 1971 was similar to that for Victoria. Major differences were noted in the existence of some regional operation in Queensland, and in the number of senior administrators. Virtually all secondary education (Grades 8-12) was offered by high schools. The Technical Education Division mainly served post-secondary pupils, and was omitted from the analysis, as was the Teacher Education division.

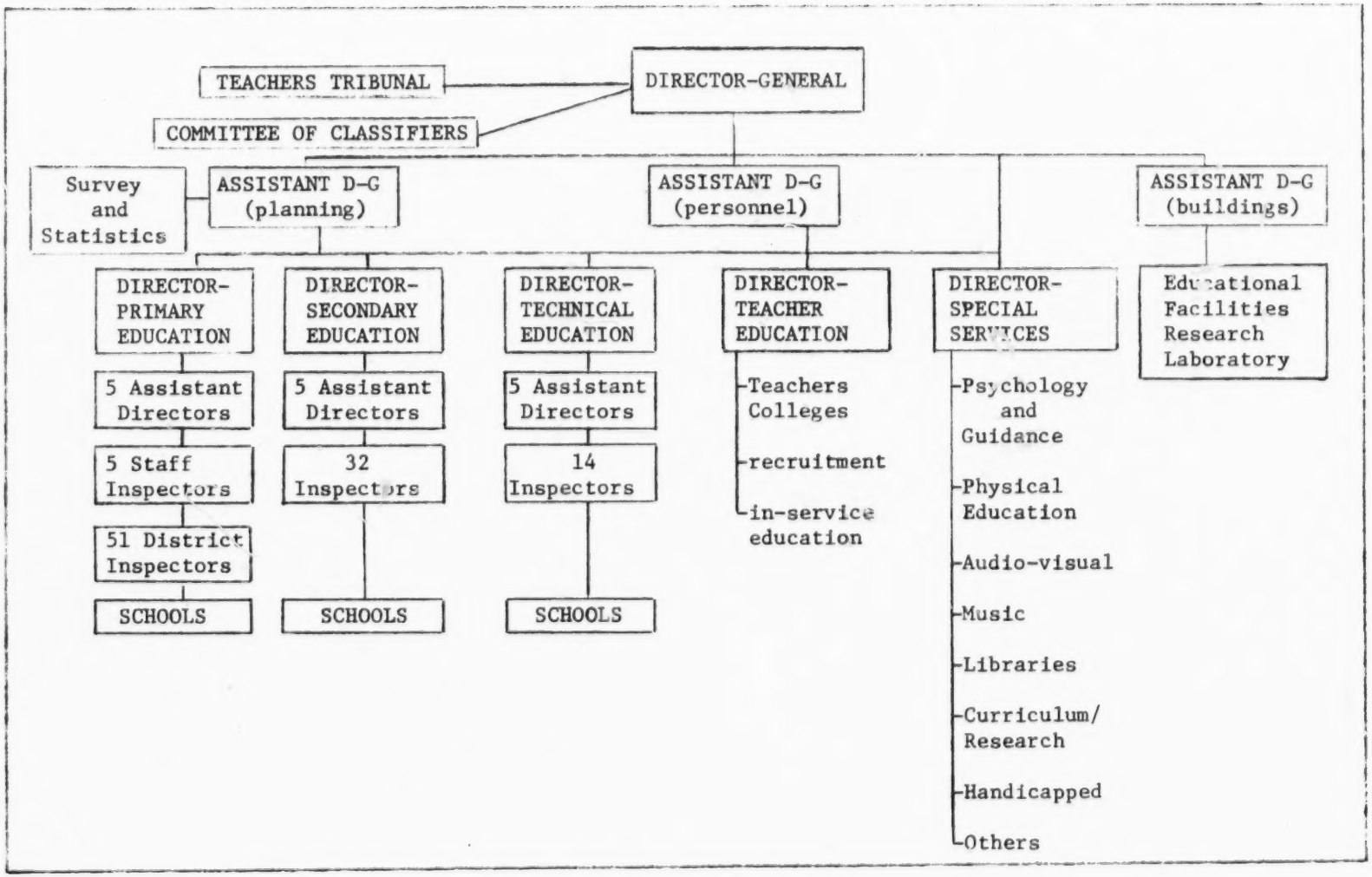

Figure 9.

Organizational Structure of the Department of Education, Victoria, in 1971

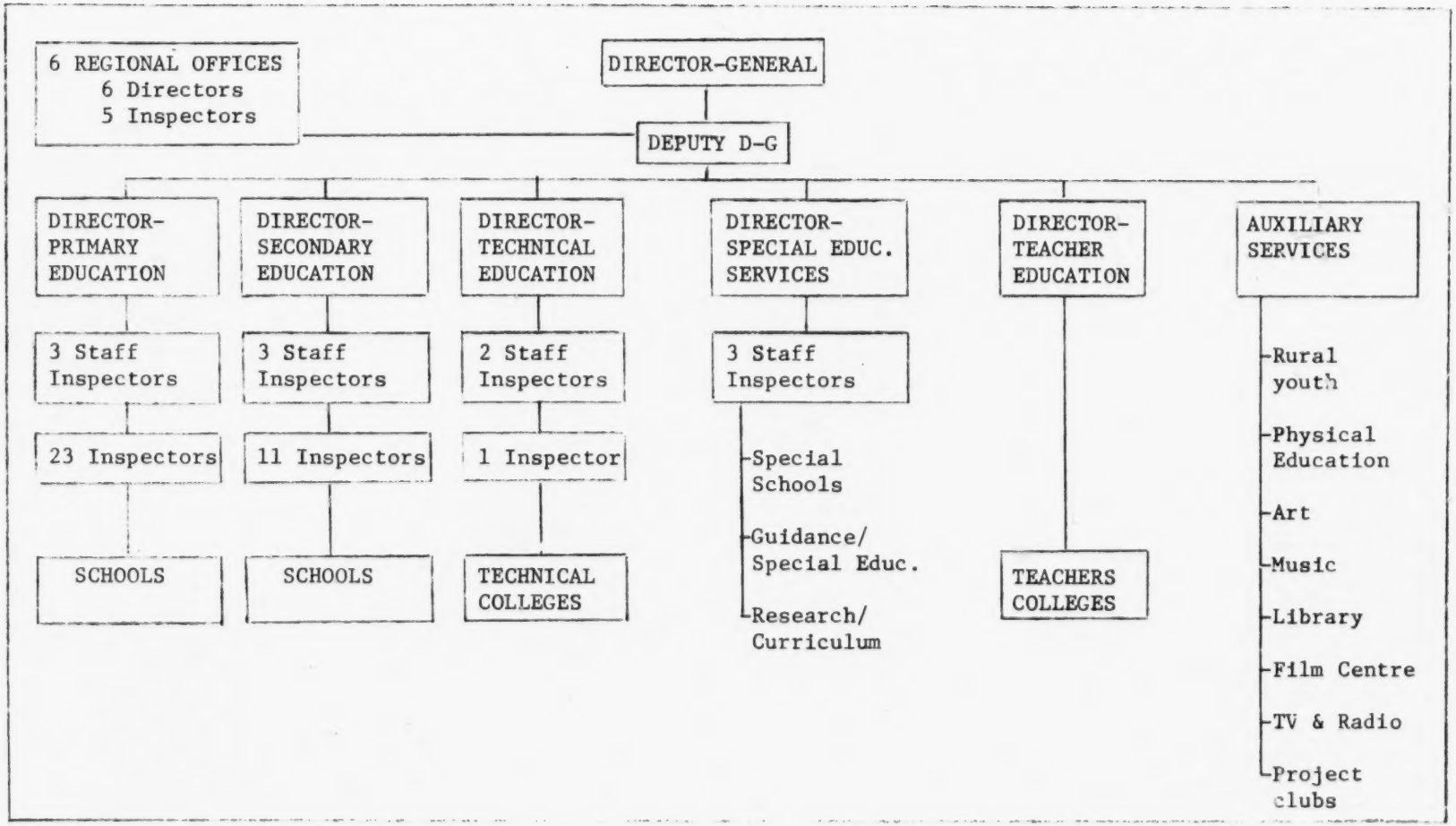

Figure 10.

Organizational Structure of the Department of Education, Queensland, in 1971

CHAPTER 2

RESEARCH METHODOLOGY

For this study, the public G. 1-12 and K-12 educational systems of Alberta and British Columbia were assumed to be a sample of the population of the educational systems of all ten Canadian provinces: similarly, those of Queensland and Victoria were assumed to be a sample of the population of the six state systems in Australia.

These four geographic areas were chosen partly because of accessibility of data through personal contacts. Also, this choice reduced the amount of travel and the research cost. However, the limitations of the sample choice are obvious when generalizations are sought. Some information about the four areas is presented in Table 1.

In several respects, Alberta, British Columbia, and Queensland were similar. They were large political units which had sparsely settled populations in areas other than the major centres which had about half of the total population. Victoria was quite different, being much smaller, more densely populated, and with a much higher percentage of its population in the capital city--no equivalent province existed in Canada.

However, the choice allowed for some comparisons within each country which may serve as a check upon other factors. In Alberta, all superintendents of school districts were locally employed in 1971-72 by a school board, whereas in British Columbia, of the 57 school superintendents, only one (in the Vancouver School District) was locally employed. The other internal difference related to regionalization: Queensland was divided into seven regions in 1971, but at that time Victoria had no regional offices of education (three were opened in 1972). Alberta had just initiated a system of six regional offices of education, but British Columbia had none and none were planned.

Any comparison of school systems in Australia and Canada should take into account the difference in enrolments in private schools. In

TABLE 1

SOME SELECTED CHARACTERISTICS OF THE FOUR PROVINCES/STATES IN 1971

Characteristic	Alberta	B.C.	Queensland	Victoria
Population	1,627,875	2,184,621	1,823,400	3,496,200
Population of Major Cities	Metropolitan Edmonton 495,700 Calgary 403,320 899,020	Metropolitan Vancouver 1,082,355	Metropolitan Brisbane 816,987	Metropolitan Melbourne 2,388,941
Percentage of Population in Major Cities	30% 25% 55%	50%	45%	68%
Area (sq. mi.)	255,285	366,255	667,000	87,884
Population Density	6.4	6.0	2.7	39.8
Number of Pupils in Schools Operated by Departments of Education or school districts	420,848	514,217	296,677	599,860

Victoria in 1969, 25% of all G. 1-12 pupils attended private schools: for Queensland, the figure was 23%. However, in Alberta and British Columbia, only very small percentages, 2% and 4% respectively, attended private schools.

SAMPLES

Because of cost and time, data could not be obtained from every school district and school in the populations, so sampling procedures were employed, and projections using interpolation were made to the populations based upon the sample data and subsequent analyses. The obtained totals were checked against provincial/state figures for accuracy. Choice of the following samples was also partly determined by the willingness of individuals to cooperate. In Alberta, the Province of Alberta provided funds additional to those of the Canada Council, allowing for obtaining of more data than was possible in British Columbia.

Alberta

1. School district data; 135 replies were obtained from 139 operating districts.
2. Interviews were conducted with 43 superintendents (or an alternate) concerning adequacy of numbers of staff.
3. Complete salary data were obtained for all Department of Education employees.
4. Interviews were held with some Department of Education employees in head office and regional offices.
5. Questionnaires providing data and opinions on staffing practices were completed by 64 principals.

British Columbia

1. School district data: 24 replies were received--this was the target figure set out of a total of 76 districts.
2. Interviews were conducted with 24 superintendents.
3. Complete salary data were obtained for all Department of Education employees.
4. Interviews were held with some Department of Education employees in the head office.
5. Questionnaires were completed by 240 principals.

(Table 2 lists the 24 B. C. School Districts in the sample.)

Queensland

1. Complete salary data were obtained for all Department of Education employees in the head office and regional offices, as well as some in-school data

TABLE 2

NUMBERS OF PUPILS IN THE TWENTY-FOUR SCHOOL DISTRICTS IN THE BRITISH COLUMBIA SAMPLE

District Name	Number of Pupils[a]
Vancouver	71,263.5
Victoria	30,955
Surrey	28,197
Burnaby	27,765
Kamloops	15,770
Central Okanagan	12,498
Nanaimo	10,540
Chilliwack	9,296
Alberni	8,667.5
Langley	7,371
Trail	5,469
Penticton	5,102
Quesnel	4,938
Cranbrook	4,102.5
Howe Sound	2,536
Ladysmith	2,510.5
South Cariboo	2,305.5
Southern Okanagan	2,251
Qualicum	1,931.5
Armstrong-Spallumcheen	1,157.5
Birch Island	1,032
Agassiz	1,011
Lillooet	974
Kettle Valley	682

[a]Kindergarten pupils were counted as 0.5.

2. Interviews were held with personnel in the head office, and twelve schools.

3. Questionnaires were completed by 87 principals.

Victoria

1. Complete salary data were obtained for all Education Department employees in the head office, as well as some in-school data.

2. Interviews were held with personnel in the head office and twenty schools.

3. Questionnaires were completed by 139 principals.

Use of Personnel in Data Collection

The senior investigator collected all the data in Australia, and some of the data in Alberta and British Columbia. Dr. T. A. Blowers assisted in data collection in Alberta. Dr. C. C. Uhlman undertook major responsibility for collection of the British Columbia data.

Personnel and salary data in Canada were supplied by each school superintendent in the sample. Various personnel in the Department of Education head office and regional offices supplied data and opinions. The questionnaires relating to staff use in specific schools were completed by the principals.

ANALYSES

Various personnel and salary ratios were calculated and compared for Alberta, British Columbia, Queensland, and Victoria. These ratios involved the following:

(1) Department of Education head office and regional office staff combined--all four areas.

(2) School district central office staff--Alberta and B.C.

(3) (1) and (2) combined--Alberta and B.C.

(4) In-school staff--all four areas.

For all four categories above, a separation was made between administrative and support staff. Only descriptive statistics were used, as inferential statistics were inappropriate.

DEFINITIONS

The personnel classification given below was developed and refined in a series of research studies at The University of Alberta.

Administrative Personnel/Component

The administrative component consisted of all Department of Education, Teacher Qualifications Service, school district, central office, and in-school personnel who:

(1) planned, organized, directed, coordinated, and/or controlled the activities and personnel of the school systems providing G. 1-12 education;

(2) made key organizational decisions;

(3) supervised the work of other personnel; and

(4) did not work directly with students.

School District Central Office Administrative Personnel/Component

The school district central office administrative component was subdivided for coding purposes into the following categories:

(1) the senior administrative staff--the superintendent, associate/assistant/deputy and/or area superintendents, and the secretary-treasurer;

(2) the intermediate administrative staff--positions such as directors, assistant directors, assistant/deputy secretary-treasurers, administrative assistants, personnel and staffing officers, staff development officers, and research and development officers;

(3) the supervisory administrative staff--directors, supervisors and assistant supervisors, subject consultants and subject coordinators concerned with instructional matters; and

(4) the service administrative staff--all administrators involved with the functions of buildings and maintenance, purchasing and stores, and computer operations. Purchasing agents, warehouse and office managers, supervisors and directors of maintenance/buildings and grounds, systems/computer programmer/analysts and information officers were included in this category.

In-School Administrative Personnel/Component

All principals, assistant principals, head teachers, department heads, subject and grade coordinators, teacher-librarians, and business administrators located in schools were included on a prorated basis as "in-school administrators." For example, if an administrator used 60 per cent of his time for administration and 40 per cent for classroom instruction, then 0.6 full-time equivalents (FTE) were allocated to in-school administration and 0.4 FTE to the instructional component.

Support Personnel/Component

The Department of Education and school district central office support components consisted of all secretarial and clerical personnel located in those offices: some personnel who performed technical duties such as printing were also included. In-school support personnel consisted of all in-school secretarial and clerical personnel and teacher aides. The Department of Education, school district central office, and in-school support components were added to obtain the "total support component." (See Limitations and Assumptions.)

School District Central Office Personnel/Component

The "school district central office component" consisted of all school district central office personnel in the administrative and support components.

Non-instructional Personnel/Component

The "non-instructional component" consisted of all Department of Education, school district central office, and in-school administrative and support personnel.

Instructional Personnel/Component

The instructional component included all classroom teachers, guidance counsellors, librarians, reading specialists, remedial teachers, therapists, social workers, psychologists, and psychiatrists. Instructional positions were defined as those requiring the rendering of direct personal services to children in the teaching-learning situation. The prorated portion of in-school administrators' time spent in classroom instruction was included in the instructional component.

When this study was originally designed, the intention was to divide the instructional component into separate parts: (1) auxiliary--the Department of Education and school district central office staff, and (2) in-school. However, these personnel in all four states/provinces spent an average of over 90 per cent of their time in schools with children. The "auxiliary sub component" was therefore deleted and these personnel were added to the instructional component.

Administrative Salary Cost

The "administrative salary cost" consisted of the total gross salaries and allowances (hereafter referred to as "salaries") paid to Department of Education administrators, school district central office administrators, and in-school administrators on a prorated basis. Fringe benefits were excluded from the calculation of the salaries.

Support Salary Cost

The "support salary cost" included the total gross salaries paid to support personnel.

School District Central Office Salary Cost

The "school district central office salary cost" consisted of the total gross salaries paid to all administrative and support personnel in the central offices of school districts, together with the honoraria paid to trustees.

Non-instructional Salary Cost

The "non-instructional salary cost" consisted of the total gross salaries paid to all non-instructional personnel.

Instructional Salary Cost

The "instructional salary cost" consisted of the total gross salaries paid to all instructional personnel.

Calculation of Salaries

All of the yearly salaries reported for Alberta and British Columbia were based on the salaries received for the month of September 1971 only. Adjustments were made to the salaries for the Canadian school districts which settled their contracts after September 1971.

Salaries for Queensland and Victoria were for the year 1971 as pertaining in June 1971.

Personnel Ratios

Ratios of administrative, support, instructional, and non-instructional personnel were each expressed as:

1) Total number of personnel in the category per 1,000 pupils;
2) Proportion of total staff in each category.

Salary Ratios

Salary ratios of administrative, central office, support, instructional, and non-instructional personnel were each expressed as:

(1) Total gross salaries of all personnel in the category per 1,000 pupils;

(2) Proportion of total salaries associated with each category.

Proration of Formula for Salaries

The administrative proportion of the salaries of in-school personnel in Alberta and British Columbia was calculated according to the following formula:

administrative salary cost = (administrative allowance) + (administrative percentage X basic salary). For example, for a principal with 60 per cent of his time allocated for administration, a monthly grid salary of $1,000 and a monthly administrative allowance of $300, the administrative salary cost = $300 + (60% of $1,000) = $900. This procedure was not necessary in Queensland and Victoria, because the salaries of administrators were not separated in this way.

LIMITATIONS

Any study of this magnitude involving large numbers of staff and students in different countries must suffer from some limitations. The following list refers to some of these.

(1) No detailed attempt was made to describe the different socio-economic, political and cultural factors which may have in part accounted for some of the findings: differences also existed in the forms of financial support, and the settling of salary negotiations.

(2) Generalizations from samples of two provinces/states to the national level were not warranted.

(3) Several approximations with respect to numbers and salaries had to be made: therefore, some data are not completely accurate, although checks were made using a variety of sources to ensure that the figures used conformed as nearly as possible to the situations. For example, some teachers who were officially listed as being on the staffs of schools were not actually so employed. Many teachers were on various kinds of study or other leave, and many were seconded from schools to other duties, especially in Victoria. In that state, the teacher shortage accentuated these problems. Another complicating factor in Victoria was the employment of day staff in technical schools for the teaching of apprentices and evening classes. In Canada, school district central office staff estimated percentages of staff time

spent in administration: Ideally this information should have been obtained from every school, but the returns from a sample of principals assisted in this regard.

(4) Salaries constitute only one aspect of operating costs, although they are by far the biggest items.

(5) Some difficulty was experienced in equating functions of staff with their titles, even after discussions had been held with officials concerning these functions. For example, a "grey area" exists between administrative functions and those performed by some senior clerical staff. Also, in-school administrators spend some of their allotted administrative time in activities such as guidance and substitute teaching.

(6) State systems of education, particularly Victoria, may offer services beyond what is offered in Canada, for example, in museums and broadcasting--these were omitted from the data.

(7) When projecting from samples to the population, several approximations were required, especially for British Columbia, Queensland and Victoria.

(8) No practical and fair basis existed for comparing the numbers of personnel needed to supply services which were provided by employed staff in some school systems and contracted out in others. For this reason, plant operation and maintenance personnel (carpenters, electricians, painters, janitors, and groundskeepers), transportation personnel (drivers, chauffeurs, and transportation supervisors), warehouse workers and storekeepers, and cafeteria personnel, were excluded from this study. For similar reasons, architects, engineers, and urban planners were excluded from the central office administrative component in this study.

(9) Correspondence schools were omitted.

(10) Staff employed on a temporary basis were not included. This did not apply to "temporary teachers" in Victoria, Australia, as they were not employed in a temporary sense in the usual meaning of that word.

(11) Kindergarten pupils were included in the British Columbia data, on an 0.5 FTE basis. This was considered necessary because of the integrated K-12 system in B.C. Their total kindergarten enrolment was only about 2% of the total enrolment.

ASSUMPTIONS

The validity of this study was dependent upon the accuracy and the completeness of the data provided by the Departments of Education, school districts, and schools. Two assumptions were made: (1) that the officials correctly understood the nature of the information required, and that they supplied complete and accurate data; (2) that the officials who supplied the data interpreted the questionnaire items in a similar manner.

CHAPTER 3

NUMBERS AND SALARIES OF STAFF

This chapter contains lists of the numbers and salaries of staff in the following categories:

(1) Central and regional offices of the Department of Education;

(2) Central offices of school districts in Canada;

(3) Schools;

(4) Total.

CENTRAL AND REGIONAL OFFICES OF DEPARTMENT OF EDUCATION

Tables 3 - 6 list the numbers of administrative and support staff and their annual salaries for various staffing categories in each of the four Departments of Education.

The Alberta Department was considerably larger than was the B.C. Department, but in making this comparison, the effects of staffing Regional Offices in Alberta and local placement of District Superintendents in B.C. should be considered. By far the largest Department staff was employed in the State of Victoria.

TABLE 3

NUMBERS AND SALARIES OF ADMINISTRATIVE AND SUPPORT STAFF
IN THE CENTRAL AND REGIONAL OFFICES OF
THE ALBERTA DEPARTMENT OF EDUCATION

Department	Administration		Support	
	No.	$	No.	$
General Administration[a]	8.8	127,871	38.4	196,589
School buildings	7.0	118,992	5.0	25,248
Personnel office	1.4	17,086	3.5	19,345
Field services (head-office)	25.0	448,728	17.0	83,568
Regional offices	52.0	1,013,520	20.0	93,780
Guidance	1.0	15,840	1.0	4,152
Registrar	2.0	27,816	11.0	56,052
Special education	7.0	107,100	7.0	35,856
Curriculum	7.0	129,492	7.0	33,576
Audio-visual	8.0	84,528	22.0	111,288
Research and development	10.0	115,788	43.0	214,704
Communications	2.0	30,060	2.0	10,608
School book branch	3.0	37,800	31.0	175,392
TOTALS	134.2	2,274,621	207.9	1,060,158

[a]Includes staff of the independent Teacher Qualifications Service.

TABLE 4

NUMBERS AND SALARIES OF ADMINISTRATIVE AND SUPPORT STAFF IN THE CENTRAL OFFICE OF THE BRITISH COLUMBIA DEPARTMENT OF EDUCATION

Department	Administration		Support	
	No.	$	No.	$
Administrative services[a]	5.5	94,376	8.3	47,638
Field services[b]	4.0	58,466	4.0	20,960
Financial services	5.4	64,924	9.9	51,876
Instructional services	23.0	271,138	48.0	251,520
Special services	5.4	72,041	27.9	146,196
Technical-vocational services	0.8	11,200	0	0
TOTALS	44.1	572,145	98.1	518,190

[a]Includes staff of the independent Teacher Qualifications Service.

[b]57 District Superintendents were counted in the central office staff of local school districts.

TABLE 5

NUMBERS AND SALARIES OF ADMINISTRATIVE AND SUPPORT STAFF IN THE CENTRAL AND REGIONAL OFFICES OF THE QUEENSLAND DEPARTMENT OF EDUCATION[a]

Functions	Administration		Support	
	No.	$	No.	$
General Administration	5	46,667	7	24,100
Primary Education	42	398,200	3	10,000
Secondary Education	18	184,600	8	30,000
Special Education and Guidance	2	23,200	11	27,500
Research	18	131,000	11	27,500
Auxiliary Services[b]	45	279,125	30	93,936
Regional Organization	11	120,400	22	72,400
Public Service	10	73,613	174	695,500
TOTAL	151	1,256,805	266	980,936

[a]Public Service staff who provided services for the Department of Education were included above.

[b]Auxiliary Services included physical education, library, project clubs, rural youth organization, television/radio, film centre, art, and music.

TABLE 6

NUMBERS AND SALARIES OF ADMINISTRATIVE AND SUPPORT STAFF IN THE CENTRAL OFFICE OF THE VICTORIAN EDUCATION DEPARTMENT[a]

Functions	Administration		Support	
	No.	$	No.	$
General Administration (Senior administrators; Teachers Tribunal; Committee of Classifiers; Statistics; Facilities)	35.5	321,800	45	193,725
Primary Education	81	799,000	39	162,500
Secondary Education	45	474,000	22	90,000
Technical Education	27	270,000	15	61,000
Special Services[b]	351	2,183,200	88	263,900
Public Service	4	45,000	323	1,383,200
TOTAL	543.5	4,093,000	532	2,154,325

[a]Public Service staff who provided services for the Education Department are included above.

[b]The numbers of administrative staff in each of the major components were:

Curriculum and Research	100
Library	75
Audio-visual and Publications	48
Music	44
Psychology and Guidance	26

CENTRAL OFFICES OF SCHOOL DISTRICTS IN CANADA

The numbers and salaries of administrative and support staff employed in the 139 operating school districts in Alberta and the 76 school districts that existed in British Columbia in 1971 are shown in Table 7. These numbers and salaries were similar for the two provinces.

SCHOOLS

The staff located in schools were categorized into administrative, instructional, and support components. The numbers of these staffs and their salaries are shown for each of the four provinces/states in Tables 8 - 11 (administrative and instructional) and Tables 12 - 15 (support).

TABLE 7

NUMBERS AND SALARIES OF ADMINISTRATIVE AND SUPPORT STAFF
IN CENTRAL OFFICES OF LOCAL SCHOOL DISTRICTS
IN ALBERTA AND BRITISH COLUMBIA

ALBERTA

Data Source	No. of Systems	Administration		Support	
		No.	$	No.	$
Obtained	132	750	10,364,316	760	4,089,216
Estimated	7	16	176,604	11	24,408
TOTAL	139	766	10,540,920[a]	771	4,113,624

[a]In addition, an estimated 881 trustees were paid honoraria of an estimated $682,000.

BRITISH COLUMBIA

Data Source	No. of Systems	Administration		Support	
		No.	$	No.	$
Obtained	24	337	5,542,956	368	2,137,032
Estimated	52	408	6,441,216	333	1,591,200
TOTAL	76	745[b]	11,984,172[c]	701	3,728,232

[b]Included 57 District Superintendents.

[c]In addition, an estimated 515 trustees were paid honoraria of an estimated $339,000.

TABLE 8

NUMBERS AND SALARIES OF ADMINISTRATIVE AND INSTRUCTIONAL STAFF WHO WORKED IN SCHOOLS IN ALBERTA

Category	139 School Districts	School for the Deaf	Total
Number of Pupils	420,713	135	420,848
Administration	1,155	3	1,158
Instruction[a]			
- in-school	19,529	32	19,561
- central office	110	-	110
TOTAL	20,794	35	20,829
Administration	$ 18,877,392	$ 46,056	$ 18,923,448
Instruction[a]			
- in-school	183,508,260	317,486	183,825,746
- central office	1,339,680	-	1,339,680
TOTAL	$203,725,332	$363,542	$204,088,874

[a]Included guidance staff, psychologists, therapists, remedial teachers, and social workers.

TABLE 9

NUMBERS AND SALARIES OF ADMINISTRATIVE AND INSTRUCTIONAL STAFF WHO WORKED IN SCHOOLS IN BRITISH COLUMBIA

Category	Sample	Non-sample	School for the Deaf & the Blind	Total
Number of pupils	258,326	255,604	287	514,217
Administration	600	556	4	1,160
Instruction[a]				
- In-school	10,828	10,262	46	21,136
- Central office	113	89	-	202
TOTAL	11,541	10,907	50	22,498
Administration	$ 11,584,930	$ 10,465,667	$ 63,200	$ 22,113,797
Instruction[a]				
- In-school	108,267,070	99,097,646	402,600	207,767,316
- Central office	1,452,000	1,161,800	-	2,613,800
TOTAL	$121,304,000	$110,725,113	$465,800	$232,494,913

[a]Includes guidance staff, psychologists, therapists, remedial teachers, and social workers.

TABLE 10

NUMBERS AND SALARIES OF ADMINISTRATIVE AND INSTRUCTIONAL STAFF WHO WORKED IN SCHOOLS IN QUEENSLAND

Category	Primary (G. 1-7)	High (G. 8-12)	Special	Total
No. of Pupils	208,460[a]	85,162[b]	3,055	296,677
Administration	370	351	28	749
Instruction	7,170	4,419	298	11,887
Total	7,540	4,770	326	12,636[c]
Administration	$ 2,954,908	$ 2,606,046	$ 224,808	$ 5,785,762
Instruction	34,262,721	21,765,650	1,415,500	57,443,871
Total	$37,217,629	$24,371,696	$1,640,308	$63,229,633

[a]Excludes 1,795 pupils enrolled in primary correspondence school.

[b]Excludes 3,132 pupils enrolled in secondary correspondence school.

[c]Excludes 66 primary and 53 secondary teachers attached to the correspondence schools.

DEPARTMENT OF EDUCATION STAFF ASSIGNED TO INSTRUCTIONAL COMPONENT

Guidance officers	57	$359,500
Therapists	21	97,000
Correctionists	5	27,750
Social worker	1	5,000
Remedial teachers	20	110,000
	104	$599,250

TOTALS

Administration	749	$ 5,785,662
Instruction	11,991	58,043,121
	12,740	$63,828,783

TABLE 11

NUMBERS AND SALARIES OF ADMINISTRATIVE AND INSTRUCTIONAL STAFF
WHO WORKED IN SCHOOLS IN VICTORIA

Category	Primary (G. 1-6)	High (G. 7-12)	Technical (G. 7-12)	Special	Total
Number of pupils	369,569	165,621	62,016	2,654	599,860
Administration	1,239	1,005	387	31	2,662
Instruction	13,725	7,969	4,322	539	26,555
Total	14,964	8,974	4,709	570	29,217
Administration	$ 8,940,686	$ 7,259,962	$ 2,808,418	$ 232,500	$ 19,241,566
Instruction	69,300,152	43,713,047	23,796,582	2,748,300	139,558,081
Total	$78,240,838	$50,973,009	$26,605,000	$2,980,800	$158,799,647

DEPARTMENT OF EDUCATION STAFF ASSIGNED TO INSTRUCTIONAL COMPONENT

Guidance officers	124	$ 932,500
Physical education teachers	101	525,200
Speech therapists	31	186,000
Music teachers	20	106,000
	276	$1,749,700

TOTALS

Administration	2,662	$ 19,241,566
Instruction	26,831	141,307,781
Total educators	29,493	$160,549,347

TABLE 12

NUMBERS AND SALARIES OF IN-SCHOOL SUPPORT STAFF

IN ALBERTA

Position	Numbers in 139 School Districts and School for the Deaf	Salaries
Secretarial-clerical	1,351	$6,332,770
Aides	648	2,776,338
TOTAL	1,999	$9,109,108

TABLE 13

NUMBERS AND SALARIES OF IN-SCHOOL SUPPORT STAFF

IN BRITISH COLUMBIA

Position	Sample	Non-Sample, and School for the Deaf and the Blind	Total
Secretarial-clerical	673	661	1,334
Aides	349	187	536
TOTAL	1,022	848	1,870
Secretarial-clerical	$3,270,000	$2,824,056	$6,094,056
Aides	1,257,576	512,048	1,769,624
TOTAL	$4,527,576	$3,336,104	$7,863,680

TABLE 14

NUMBERS AND SALARIES OF IN-SCHOOL SUPPORT STAFF IN QUEENSLAND

Position	Primary	Secondary	Special	Total
Administrative officers		21		21
Typists	260	191	15	466
Laboratory assistants		52		52
Library assistants		60		60
TOTAL	260	324	15	599
Administrative officers		$105,000		$ 105,000
Typists	$650,000	477,000	$37,500	1,164,500
Laboratory assistants		182,000		182,000
Library assistants		120,000		120,000
TOTAL	$650,000	$884,000	$37,500	$1,571,500

TABLE 15

NUMBERS AND SALARIES OF IN-SCHOOL SUPPORT STAFF IN VICTORIA

Category	Primary	High	Technical	Special	Total
Secretarial-clerical	60	505	246	7	818
Laboratory assistants	-	21	4	-	25
Aides	3	60	130	-	193
TOTAL	63	586	380	7	1,036
Secretarial-clerical	$144,000	$1,664,000	$ 797,000	$56,000	$2,661,000
Laboratory assistants	-	69,000	16,000	-	85,000
Aides	11,000	210,000	450,000	-	671,000
TOTAL	$155,000	$1,943,000	$1,263,000	$56,000	$3,417,000

TOTAL DISTRIBUTIONS

Table 16 shows the distributions of staff in administrative, support, non-instructional, instructional, and total components for the four provinces/states. The distributions of salaries are shown in Table 17.

TABLE 16

TOTAL DISTRIBUTIONS OF STAFF IN FOUR PROVINCES/STATES

Category	Alberta		B.C.		Qld.		Vic.	
PUPILS	420,848		514,217		296,677		599,860	
ADMINISTRATION								
Dept. of Ed.	134		44[a]		151		544	
C.O. School Districts[b]	766		745		-		-	
Dept. of Ed. & C.O.	900	900	789	789	151	151	544	544
In-school		1,158		1,160		749		2,662
Total		2,058		1,949		900		3,206
SUPPORT								
Dept. of Ed.	208		98		266		532	
C.O. School Districts	771		701		-		-	
Dept. of Ed. & C.O.	979	979	799	799	266	266	532	532
In-school - clerical	1,351		1,334		487		818	
- aides	648		536		112		218	
- total	1,999	1,999	1,870	1,870	599	599	1,036	1,036
Total		2,978		2,669		865		1,568
NON-INSTRUCTIONAL								
Dept. of Ed.	342		142		417		1,076	
C.O. School Districts	1,537		1,446		-		-	
Dept. of Ed. & C.O.	1,879	1,879	1,588	1,588	417	417	1,076	1,076
In-school		3,157		3,030		1,348		3,698
Total		5,036		4,618		1,765		4,774
INSTRUCTIONAL								
Dept. of Ed.	-		-		104		276	
C.O. School Districts	110		202		-		-	
In-school	19,561		21,136		11,887		26,555	
Total	19,671		21,338		11,991		26,831	
TOTAL	24,707		25,956		13,756		31,605	

[a] Excludes the District Superintendents, who were included in the C.O. School Districts component.

[b] CO refers to the Central Office of school districts.

TABLE 17

TOTAL DISTRIBUTIONS OF SALARIES IN FOUR PROVINCES/STATES

Category	Alberta (Canadian $000's)		B.C. (Canadian $000's)		Queensland (Australian $000's)		Victoria (Australian $000's)	
ADMINISTRATION								
Dept. of Ed.	2,275		572		1,257		4,093	
C.O. School Districts[a]	11,223		12,323		-		-	
Dept. of Ed. & C.O.	13,498	13,498	12,895	12,895	1,257	1,257	4,093	4,093
In-school		18,923		22,114		5,786		19,242
Total		32,421		35,009		7,042		23,335
SUPPORT								
Dept. of Ed.	1,060		518		981		2,154	
C.O. School Districts	4,114		3,728		-		-	
Dept. of Ed. & C.O.	5,174	5,174	4,246	4,246	981	981	2,154	2,154
In-school - clerical	6,333		6,094		1,270		2,661	
- aides	2,776		1,770		302		756	
- total	9,109	9,109	7,864	7,864	1,572	1,572	3,417	3,417
Total		14,283		12,110		2,552		5,571
NON-INSTRUCTIONAL								
Dept. of Ed.	3,335		1,090		2,238		6,247	
C.O. School Districts	15,337		16,051		-		-	
Dept. of Ed. & C.O.	18,671	18,671	17,142	17,142	2,238	2,238	6,247	6,247
In-school		28,033		29,977		7,357		22,659
Total		46,704		47,119		9,595		28,906
INSTRUCTIONAL								
Dept. of Ed.	-		-		599		1,750	
C.O. School Districts	1,340		2,614		-		-	
In-school	183,826		207,767		57,444		139,558	
Total	185,165		210,381		58,043		141,308	
TOTAL	231,869		257,500		67,638		170,214	

[a]Includes honoraria for trustees of $682,000 in Alberta and $339,000 in British Columbia.

CHAPTER 4

STAFFING AND SALARY RATIOS

Based upon the data in Tables 16 and 17 certain ratios were developed. In Table 18, the percentages of all employees in various categories are given. Table 19 presents the same categories of percentages for salaries.

In order to provide a different basis for comparison, the numbers of staff per 1,000 pupils were calculated for varying staff components (Table 20). The salary costs per pupil were also calculated for these components (Table 21), but these should be carefully interpreted because of differences in exchange rates (at the time of data collection, $1.00 Aust. ≡ $1.15 Cdn.), and differences in levels of salaries in each country. The information in Table 21 is not discussed in this Report, but is provided for interest.

ADMINISTRATIVE STAFF

As could be expected under centralized control, the percentages of employees involved in administration in the head and regional offices of the Departments of Education in Queensland and Victoria were substantially higher than in Alberta and British Columbia. From Table 18, the *unweighted* means were 1.41 per cent for the two Australian states, and 0.36 per cent for the two Canadian provinces. (The use of such means does not imply that these figures represent national data: earlier reference was made to the difficulty of generalization from the restricted samples.)

When the percentages employed in the central offices of school districts in Canada were added to the Department of Education percentages, a total "out-of-school administrative percentage" was obtained (Table 18). The hypothesis, which stated that this percentage would be higher for Alberta and British Columbia than for Queensland and Victoria, was supported. The obtained Canadian average was 3.34 per cent, as compared with the obtained Australian average of 1.41 per cent: that is, the two Canadian provinces allocated over twice the percentage of staff to this administrative component as did the two Australian states.

TABLE 18

PERCENTAGES OF EMPLOYEES IN VARIOUS CATEGORIES
IN FOUR PROVINCES/STATES

Category	Alberta		B.C.		Qld.		Vic.	
ADMINISTRATION								
Dept. of Ed.	0.54		0.17		1.10		1.72	
C.O. School Districts	3.10		2.87		-		-	
Dept. of Ed. & C.O.	3.64	3.64	3.04	3.04	1.10	1.10	1.72	1.72
In-school		4.69		4.47		5.44		8.42
Total		8.33		7.51		6.54		10.14
SUPPORT								
Dept. of Ed.	0.84		0.38		1.93		1.68	
C.O. School Districts	3.12		2.70		-		-	
Dept. of Ed. & C.O.	3.96	3.96	3.08	3.08	1.93	1.93	1.68	1.68
In-school - clerical	5.47		5.14		3.54		2.59	
- aides	2.62		2.07		0.81		0.69	
- total	8.09	8.09	7.20	7.20	4.35	4.35	3.28	3.28
Total		12.05		10.28		6.29		4.96
NON-INSTRUCTIONAL								
Dept. of Ed.	1.38		0.55		3.03		3.40	
C.O. School Districts	6.23		5.57		-		-	
Dept. of Ed. & C.O.	7.61	7.61	6.12	6.12	3.03	3.03	3.40	3.40
In-school		12.78		11.67		9.80		11.70
Total		20.38		17.79		12.83		15.11
INSTRUCTIONAL								
Dept. of Ed.	-		-		0.76		0.87	
C.O. School Districts	0.45		0.78		-		-	
In-school	79.16		81.43		86.42		84.03	
Total	79.62		82.21		87.17		84.89	

TABLE 19

PERCENTAGES OF SALARIES IN VARIOUS CATEGORIES
IN FOUR PROVINCES/STATES

Category	Alberta		B.C.		Qld.		Vic.	
ADMINISTRATION								
Dept. of Ed.	0.98		0.22		1.86		2.40	
C.O. School Districts	4.84		4.78		-		-	
Dept. of Ed. & C.O.	5.82	5.82	5.00	5.00	1.86	1.86	2.40	2.40
In-school		8.16		8.59		8.55		11.30
Total		13.98		13.60		10.41		13.71
SUPPORT								
Dept. of Ed.	0.46		0.20		1.45		1.27	
C.O. School Districts	1.77		1.45		-		-	
Dept. of Ed. & C.O.	2.23	2.23	1.65	1.65	1.45	1.45	1.27	1.27
In-school - clerical	2.73		2.37		1.88		1.56	
- aides	1.20		0.69		0.45		0.44	
- total	3.93	3.93	3.05	3.05	2.32	2.32	2.01	2.01
Total		6.16		4.70		3.77		3.27
NON-INSTRUCTIONAL								
Dept. of Ed.	1.44		0.42		3.31		3.67	
C.O. School Districts	6.61		6.24		-		-	
Dept. of Ed. & C.O.	8.05	8.05	6.66	6.66	3.31	3.31	3.67	3.67
In-school		12.09		11.64		10.88		13.31
Total		20.14		18.30		14.19		16.98
INSTRUCTIONAL								
Dept. of Ed.	-		-		0.89		1.03	
C.O. School Districts	0.58		1.02		-		-	
In-school	79.29		80.69		84.92		82.00	
Total	79.86		81.70		85.81		83.02	

TABLE 20

NUMBERS OF VARIOUS CATEGORIES OF STAFF PER 1,000 PUPILS
IN FOUR PROVINCES/STATES

Category	Alberta		B.C.		Qld.		Vic.	
ADMINISTRATION								
Dept. of Ed.	0.32		0.09		0.51		0.91	
C.O. School Districts	1.82		1.45		-		-	
Dept. of Ed. & C.O.	2.14	2.14	1.54	1.54	0.51	0.51	0.91	0.91
In-school		2.75		2.26		2.52		4.44
Total		4.89		3.80		3.03		5.34
SUPPORT								
Dept. of Ed.	0.49		0.19		0.90		0.89	
C.O. School Districts	1.84		1.36		-		-	
Dept. of Ed. & C.O.	2.33	2.33	1.55	1.55	0.90	0.90	0.89	0.89
In-school - clerical	3.21		2.59		1.64		1.36	
- aides	1.54		1.04		0.38		0.36	
- total	4.75	4.75	3.63	3.63	2.02	2.02	1.73	1.73
Total		7.08		5.18		2.92		2.61
NON-INSTRUCTIONAL								
Dept. of Ed.	0.81		0.28		1.41		1.79	
C.O. School Districts	3.65		2.81		-		-	
Dept. of Ed. & C.O.	4.46	4.46	3.09	3.09	1.41	1.41	1.79	1.79
In-school		7.50		5.89		4.54		6.16
Total		11.97		8.98		5.95		7.96
INSTRUCTIONAL								
Dept. of Ed.	-		-		0.35		0.46	
C.O. School Districts	0.26		0.39		-		-	
In-school	46.48		41.10		40.07		44.27	
Total	46.74		41.49		40.42		44.73	
Nos. of pupils per FTE instructor	21.39		24.10		24.74		22.36	

TABLE 21

SALARY COSTS PER PUPIL FOR VARIOUS CATEGORIES OF STAFF
IN FOUR PROVINCES/STATES

Category	Alberta (Canadian $)		B.C.		Queensland (Australian $)		Victoria	
ADMINISTRATION								
Dept. of Ed.	5.40		1.11		4.24		6.82	
C.O. School Districts	26.67		23.96		-		-	
Dept. of Ed. & C.O.	32.07	32.07	25.17	25.17	4.24	4.24	6.82	6.82
In-school		44.97		43.01		19.50		32.08
Total		77.04		68.18		23.74		38.90
SUPPORT								
Dept. of Ed.	2.52		1.01		3.31		3.59	
C.O. School Districts	9.77		7.25		-		-	
Dept. of Ed. & C.O.	12.29	12.29	8.26	8.26	3.31	3.31	3.59	3.59
In-school - clerical	15.05		11.85		4.28		4.44	
- aides	6.60		3.44		1.02		1.26	
- total	21.64	21.64	15.29	15.29	5.30	5.30	5.70	5.70
Total		33.94		23.55		8.60		9.29
NON-INSTRUCTIONAL								
Dept. of Ed.	7.92		2.12		7.54		10.41	
C.O. School Districts	36.45		31.21		-		-	
Dept. of Ed. & C.O.	44.37	44.37	33.33	33.33	7.54	7.54	10.41	10.41
In-school		66.61		58.30		24.80		37.77
Total		110.98		91.63		32.34		48.19
INSTRUCTIONAL								
Dept. of Ed.	-		-		2.02		2.92	
C.O. School Districts	3.18		5.08		-		-	
In-school	436.80		404.05		193.62		232.65	
Total	439.98		409.13		195.64		235.57	
TOTAL	550.96		500.76		227.99		283.76	

The comparison of numbers of out-of-school administrators per 1,000 pupils (Table 20) showed an even greater emphasis on this component in Canada, with a mean of 1.84 as compared with 0.71 for Australia.

In Australia, salaries for Department of Education administrators averaged 2.13 per cent of total salaries (Table 19), whereas the Canadian average was 0.60 per cent. However, for the total out-of-school administrative component, the Canadian mean was 5.41 per cent. These figures illustrate that the school district central office administrators far outnumbered those located in the Department of Education: this applied to both Alberta and British Columbia. In fact, the school districts alone employed a higher proportion of administrative staff, and paid them a higher proportion of total salaries, than did the Australian State Departments of Education.

The in-school administrative percentages showed the reverse trend, with the Australian mean of 6.93 per cent being substantially higher than the Canadian mean of 4.58 per cent. This difference was largely produced by the mean of 8.42 per cent for Victorian schools, and the validity of generalization to the national scene must therefore be questioned. Nevertheless, in the absence of a second administrative tier (the school district), a greater administrative load could conceivably be placed upon in-school administrators. A comparison of the in-school administrative allocations showed that in Victorian primary schools, the principals, infant mistresses, and department heads received higher percentages of time for administrative tasks than did their equivalents in the other three geographic areas. At the secondary school level, Victorian schools showed higher mean administration allocations for nearly all of the categories used--principal, vice-principals (or equivalents), department heads, sports supervisor, teacher-librarian, and "other"--when compared with one or more of Queensland, Alberta, and British Columbia.

This relative emphasis in Victoria was also shown in Tables 20 and 21. Victoria had 4.44 in-school administrators per 1,000 pupils as compared with the Queensland figure of 2.52 and the Canadian mean of 2.51. The salaries paid to in-school administrators in Victoria constituted 11.30 per cent of total salaries, with the Queensland figure being 8.55 per cent and the Canadian average 8.38 per cent.

The total administration component (Department of Education, central offices of school districts, and schools) averaged 7.92 per cent in Canada and 8.34 per cent in Australia. The total numbers of administrators per 1,000 pupils averaged 4.19 in Australia and 4.35 in Canada. When examining the percentages of total salaries paid to the total administrative staff, Alberta, British Columbia, and Victoria showed 13.98, 13.60, and 13.71 respectively, with Queensland being lower at 10.26 per cent.

SUPPORT STAFF

The support ratios followed the same general pattern as the administration ratios. From Table 18, the average Australian percentage of staff in Department of Education support positions was 1.81 as compared with 0.61 for Canada. The addition of support staff in the central offices of school districts substantially raised the average Canadian figure to 3.52 per cent.

With respect to the numbers of support staff per 1,000 pupils (Table 20), the Canadian average figures were 0.34 and 1.94 (Department of Education and total out-of-school) and the average Australian Department of Education figure was 0.90. In Table 19, the data show that the differences between total out-of-school support salaries as a percentage of total salaries was not as great as that obtained for the above-mentioned staff ratios. However, as with the administrative component, the Canadian school districts employed a greater percentage of the total staff in support positions, and a greater number of support staff per 1,000 pupils, than did the Australian Departments of Education. This finding supported the second aspect of the hypothesis.

At the school level, both Canadian provinces employed higher percentages of their staffs in clerical and aide positions than did the Australian states: the clerical components averaged 5.31 per cent and 3.07 per cent, with aides averaging 2.35 per cent and 0.75 per cent respectively. On the per 1,000 pupil basis, the clerical averages were 2.90 and 1.50, with the aide averages being 1.29 and 0.37.

Finally, the total support component reflected these differences with the Canadian and Australian averages being 11.17 per cent and 5.63 per cent (percentages of total staff), and 6.13 and 2.77 (support staff per 1,000 pupils).

NON-INSTRUCTIONAL STAFF

The administration and support components were added to give a non-instructional component. At the Department of Education level, the mean percentages of staff employed in Australia and Canada were 3.22 and 0.97 respectively. A wide discrepancy was also noted in the ratios of non-instructional staff per 1,000 pupils, and percentages of total salaries paid to non-instructional staff.

For the Department of Education and school district central offices taken together, the average percentages of employees involved in non-instructional tasks were 6.87 (Canada) and 3.22 (Australia). On a staff per 1,000 pupil basis, the averages were 3.78 and 1.60, and the percentages of total salaries paid to non-instructional staff were 7.36 and 3.99.

At the school level, less difference occurred between the Australian and Canadian ratios. The Canadian non-instructional in-school staff averaged 12.23 per cent of total staff as compared with the average Australian figure of 10.75. On a per 1,000 pupil basis, the average in-school non-instructional figures were 6.70 for Canada and 5.35 for Australia. The in-school non-instructional component received an average of 11.87 per cent of total salaries in Canada, and 12.10 per cent in Australia.

Total non-instructional staff represented, on average, 19.09 per cent of all staff in Canada, and 13.97 per cent in Australia. In Canada, the mean number of total non-instructional staff per 1,000 pupils was 10.48, and in Australia, 6.96. Total non-instructional staff received an average 19.22 and 15.59 per cent of total salaries in Canada and Australia respectively.

INSTRUCTIONAL STAFF

Alberta and British Columbia employed 79.62 per cent and 82.21 per cent respectively of their staffs in instructional positions, for an average of 80.92 per cent. The Australian average was 86.03 per

cent, based on 87.17 per cent for Queensland and 84.89 per cent for Victoria. Greater similarity was shown in the number of instructional staff per 1,000 students, with 44.12 for Canada and 42.58 for Australia. Expressed in a more familiar form, the average number of pupils per FTE instructor was 22.75 for Canada and 23.55 for Australia.

The average percentage of salaries allocated to instructional staff was 80.78 in Canada and 84.42 in Australia.

Alberta had the highest numbers of both instructional and non-instructional staff per 1,000 pupils (Table 20). Care should be taken in interpretation of the presented data, as Table 18 shows that Alberta had the lowest percentage of staff in instructional positions.

COMMENTS

If the four provinces/states used in this research project are taken as representative samples, despite the limitations mentioned earlier, then the operation of education on the joint Department of Education/school district basis, as used in Canada, would appear to require allocation of a higher proportion of personnel and salary resources than does the Australian system of greater state control. Partly because of the large volume of work which appears to be involved in reporting between a Department of Education and school district officials, this result was anticipated.

However, other factors may be involved. For example, the school districts may provide a better level of service in matters such as consultative assistance to teachers and financial reporting than does a more remote Department of Education. This study did not allow assessment of this possibility, but it appears to be an area worthy of investigation. However, the impression was gained that the Departments of Education in Australia were understaffed in a variety of categories (for example, research, planning), although this opinion was also expressed to the author in British Columbia.

The larger school districts in Alberta and British Columbia employ numbers of central office staff very similar in size to the numbers employed by the Department of Education. In part, the greater size of the school district central office component for each province may result from some duplication of function, as can be seen from the

organizational charts. Between the Department of Education and a large school district, duplication of structure occurs, for example, in the areas of curriculum/program development and planning. Among school districts, perhaps the greatest overlap occurs in curriculum/program development activities. However, this does not mean that this duplication is neither beneficial nor complementary: again, this may prove to be a useful area of functional analysis.

Mention was made earlier of socio-economic, political, traditional and financial differences among the four geographical areas. A detailed examination of the relationship between these aspects and educational governance in Australia and Canada could be undertaken with benefit. For example, the substantial proportion of students in private schools in Australia probably would affect overall community attitudes towards support of public education.

In Canada, the administrators and school trustees of local school districts and Department of Education staff work jointly with private architects and builders. In the Australian states, local school administrators are little involved in these activities, as most of the planning and supervision of construction/maintenance is performed by the Departments of Public Works in consultation with a few senior officials of Departments of Education. The researcher has observed that these activities related to school plant occupied a considerable proportion of the time of local school administrators in Canada. Use of centralized planning and standardized designs appear to reduce the proportion of time required on plant matters. Officials in the Public Works Departments in Australia kindly provided information concerning numbers and salaries of their staffs. These precise details are beyond the scope of this study, but the following data which show the FTE numbers of staff and salaries occupied in activities (including clerical/secretarial) related to plant for G. 1-12 education, may be of interest. For most staff in both states, 60 per cent of total time was estimated to be spent on the above activities: the salaries were correspondingly apportioned.

(1) Queensland 444 FTE Staff @ $1,909,000 p.a.

(2) Victoria 486 FTE Staff @ $2,625,000 p.a.

At the school level, the staffing ratios require careful interpretation. Victoria obviously provided in its staffing formulae a higher percentage of staff for administration than did the three other areas. This seemed to be unusual in a time of staff shortages. But in some ways, the use of more staff in administrative capacities may reflect higher levels of service and diversification of the school program. To immediately view such a higher percentage as indicating inefficiency would be unjustified, even though "administration" can be viewed, to a large extent, as a facilitating activity which adds to the overhead costs. In addition, the official view of the Education Department in Victoria was that schools should operate in as independent a manner as possible, with minimum referral to the head office.

The results obtained by this study provided information relevant to the centralization-decentralization discussion. They did not give definitive answers to the problem of which of the two approaches produces a better framework for the provision of instruction. Future research on this matter should focus upon which specific functions are better administered centrally or locally, upon detailed analyses of functions which are performed by the administrative, support and instructional components, upon the functions which regional offices of education can provide, and upon the relative advantages of school district boards as compared with boards/committees established for individual schools.